

CLAIMSWhat Is Claimed Is:

1. In a spectral ellipsometer having a source of multi-wavelength light, an optical system for directing the light, and a detecting optical system for receiving light after contact with a sample surface, the improvement comprising:
 4. an optical element for receiving the multi-wavelength light directed from the optical system and focusing the multiple wavelength light onto a single spot on the sample surface.
1. 2. The spectral ellipsometer of Claim 1 wherein the optical element is a spherical prism.
1. 3. The spectral ellipsometer of Claim 1 wherein the optical element is a polarizing prism with at least one curved surface for transmitting the multi-wavelength light.
1. 4. In a spectral ellipsometer, which includes a light incidence optical system for achieving spot incidence of polarization light of multi-wavelengths onto a sample surface and a detecting optical system for outputting information concerning the sample surface based on an amount of change in elliptical polarization reflected by the sample surface, the improvement comprising a prism polarizer employed in the light incidence optical system with a curved light-incident surface and a curved light-outgoing surface that is orthogonal with respect to a progressing direction of the respective direction of incident and outgoing light.

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1 5. A method of optically determining the characteristics of a sample
2 surface, comprising:

3 providing a multi-wavelength light;
4 polarizing the multi-wavelength light;
5 directing the polarized multi-wavelength light to focus at an oblique
6 angle on a single point on a sample surface;
7 measuring the reflected polarized light from the sample surface, and
8 determining the characterization from the change in polarization
9 determined in the measured light.

1 6. The method of Claim 5, wherein the directing step includes a spherical
2 prism polarization.

1 7. The method of Claim 6, wherein the polarizing prism has an incident
2 convex surface and an exiting concave surface.